

**RE Cinco Gen-Tie Project
DRAFT VISUAL RESOURCES TECHNICAL REPORT**

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Prepared for:

BLM Ridgecrest Field Office
California Desert District
Ridgecrest, California 93555
Contact: Peter Godfrey, Project Manager
(951) 697-5385

Project Proponent:

RE Barren Ridge Solar 1, LLC
c/o Recurrent Energy, LLC
300 California Street, 7th Floor
San Francisco, California 94101

Prepared By:

AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
(619) 233-1454
Contact: Garrett L. Avery, ASLA

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GLOSSARY OF TERMS AND ACRONYMS

AC	Alternating Current
BLM	Bureau of Land Management
FHWA	Federal Highway Administration
GIS	Geographic Information System
KOP	Key Observation Point
kV	Kilovolt
MW	Megawatt
NEPA	National Environmental Protection Act
NHS	National Highway System
OHV	Off-Highway Vehicle
Proposed Action	RE Cinco Gen-Tie Project
SQRU	Scenic Quality Rating Unit
VRI	Visual Resource Inventory
VRM	Visual Resource Management

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EXECUTIVE SUMMARY

RE Barren Ridge Solar 1, LLC (Applicant), a subsidiary of Recurrent Energy LLC, proposes to construct and operate the RE Cinco Gen-tie, an electrical generator intertie (gen-tie) line that would be located on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area (CDCA) planning area. The proposed gen-tie would interconnect to the regional electrical grid a Kern County-approved 60 megawatt (MW) solar photovoltaic (PV) power generating facility (solar facility) located on private lands in an unincorporated area of Kern County, California.

Four Alternative alignments comprise the Proposed Action; however, only three alternative gen-tie alignments are assessed in this Visual Resources Technical Report. Analysis was not conducted for Alternative 1, No Action. Conversely, the action alternatives were evaluated in detail. Evaluation of Alternative 2A/B, or the Applicant's preferred alignment, considered structural options including steel lattice and wooden H-frame transmission structures. This alignment would originate at the northwest corner of the solar facility site and extend north and east across federal and private lands before connecting to the existing LADWP Barren Ridge Switching Station.

The analysis herein uses Interim VRM Classifications developed independently by POWER Engineers, Inc. for the purposes of the Barren Ridge Renewable Transmission Project (2011). The Proposed Action would occur in a Class C scenic landscape with Class III Management Objectives; with moderate to high viewer sensitivity along SR 14, an eligible State Scenic Highway. In viewsheds with existing electrical transmission line structures and ground disturbances, contrasts would be weak to moderate, depending on distance from the observer and number and type of structures. In all cases, implementation occurring in the immediate foreground of the observer would cause greater contrasts and/or impacts to the visual landscape than those appearing at a further distance (Alternatives 3 and 4).

More generally, it is anticipated that visual resources would be temporarily affected by transmission line construction in all cases due to the activities necessary to build the transmission and related facilities. Viewshed disturbance, including project visibility, includes the addition of self-supporting steel lattice structures or wooden H-frame structures, conductors, cleared ROWs, temporary buildings, fences, and construction-related equipment, debris storage, and ground areas cleared for construction, such as access roads, transmission line tower work areas, conductor stringing and tensioning sites, material storage yards, staging areas, ground electrode systems, and the proposed (230-kV) electrical lines.

In summary, the Proposed Action would result in the following visual effects, detailed by alignment Alternative:

Alternative 1 – No visual impacts anticipated.

Alternative 2A – Low degree of contrast with moderate viewer sensitivity due to proposed addition of wooden H-frame transmission structures. The Proposed Action would not be visually dominant in the landscape, and would be subordinate to the larger, existing transmission structures and surrounding visual background.

Alternative 2B – Moderate degree of contrast with moderate level of viewer sensitivity due to proposed addition of steel-lattice transmission structures. Proposed Action would not be visually

dominant in the landscape, and would be subordinate to the larger, existing transmission structures and surrounding visual background.

Alternative 3 – High degree of contrast with moderate to high viewer sensitivity due to addition of wooden H-frame transmission structures along SR 14. The Proposed Action would become visually dominant in the landscape at points along the alignment, and in both immediate foreground and foreground-middleground views would be subordinate to neither the existing transmission structures nor larger visual background.

Alternative 4 – High degree of contrast with moderate to high viewer sensitivity due to addition of wooden H-frame transmission structures and conductors located parallel and across SR 14. The Proposed Action would be visually dominant in the landscape at points along the alignment – particularly at the intersection of SR 14 – and in both immediate foreground and foreground-middleground views would be subordinate to neither the existing transmission structures nor larger visual background.

1.0 INTRODUCTION

1.1 Purpose of the Visual Resources Report

This visual resources report assesses the potential effects of the RE Cinco Gen-Tie Project on visual resources in accordance with National Environmental Protection Act (NEPA) and the Bureau of Land Management (BLM) Visual Resource Management (VRM) system. This study also includes proposed measures to avoid, minimize, or mitigate adverse visual impacts associated with construction, operation, and decommissioning of the Proposed Action.

1.2 Proposed Action

RE Barren Ridge Solar 1, LLC (Applicant), a subsidiary of Recurrent Energy LLC, proposes to construct and operate the RE Cinco Gen-tie, an electrical generator intertie (gen-tie) line that would be located on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area (CDCA) planning area. The proposed gen-tie is located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, approximately 12 miles northeast of the community of Mojave, and approximately 0.8 miles east of the Los Angeles Aqueduct.

The proposed gen-tie would interconnect to the regional electrical grid a Kern County-approved 60 megawatt (MW) solar photovoltaic (PV) power generating facility (solar facility) located on private lands in an unincorporated area of Kern County, California.

The RE Cinco Gen-tie would convey the power generated at the planned solar facility to the electric grid. The proposed gen-tie would be a 230-kilovolt (kV) line between the private lands solar facility and the existing Los Angeles Department of Water and Power's (LADWP) Barren Ridge Switching Station. The switching station is located approximately 2 miles north of the planned solar facility site. The Applicant proposes to construct portions of the RE Cinco Gen-tie across public lands administered by the BLM. Because the proposed RE Cinco Gen-tie would be located partly on lands administered by the BLM, the Applicant filed a right-of-way (ROW) application with the BLM to construct, operate, maintain, and decommission the gen-tie.

Four Alternative alignments comprise the Proposed Action; however, only three alternative gen-tie alignments are assessed in this Visual Resources Technical Report. Analysis was not conducted for Alternative 1, No Action. Conversely, the action alternatives were evaluated in detail. Evaluation of Alternative 2A/B, or the Applicant's preferred alignment, considered structural options including steel lattice and wooden H-frame transmission structures. This alignment would originate at the northwest corner of the solar facility site and extend north and east across federal and private lands before connecting to the existing LADWP Barren Ridge Switching Station. The alternative alignments are shown in **Figure 1**.

Alternative 1 (No Action Alternative)

The No Action Alternative is defined as the BLM denying the ROW grant for either of the gen-tie alternatives on BLM-managed land (Alternatives 2 and 3). Under the No Action Alternative, the Cinco solar generation facility would either not be built, or would obtain gen-tie access via a private alignment alternative. Regardless, under the No Action Alternative, BLM-managed lands in the area would remain available for other uses that are consistent with the CDCA Plan and

other BLM land use designations and policies, including possible placement of transmission facilities that could be proposed by other applicants in the future.

Given these conditions, Alternative 1 would not alter existing visual conditions or result in significant visual effects; and is not evaluated further.

Alternative 2 (Applicant's Preferred Alignment)

Alternative 2 is a primarily public land alignment approximately 2.0 miles in length, commencing at the northwest corner of the planned solar facility site, traveling northeasterly into Sections 24 and 13, Township 31 South, Range 36 East, then into Section 13, Township 31 South, Range 36 ½ East, then terminating in Section 18, Township 31 South, Range 37 East.

Implementation of Alternative 2 was evaluated for potentially significant visual effects resulting from the implementation of all proposed transmission structures.

Alternative 3 (Alternative BLM Lands Alignment)

Alternative 3 is a primarily public land alignment approximately 1.9 miles in length, commencing at the northeast corner of the planned solar facility site and travelling into Section 25, Township 31 South, Range 36 ½ East, then traveling northerly through the western portions of Sections 24, and 13 of Township 31 South, Range 36 ½ East, and then turning northeastwards and terminating in Section 18, Township 31 South, Range 37 East.

Implementation of Alternative 3 was evaluated for potentially significant visual effects resulting from construction and operation of proposed wooden H-frame transmission structures.

Alternative 4 (Private Land Alignment)

Alternative 4 is an entirely private land alternative approximately 3.5 miles in length, commencing at the southeast corner of the planned solar facility site and travelling easterly in Section 25 Township 31 South, Range 36 East, crossing over State Route 14 (SR-14), and then traveling easterly through Section 36, Township 31 South, Range 36 ½ East and into Section 31, Township 31 South, Range 37 East, then northerly into Section 30, Township 31 South, Range 37 E, then north easterly within Section 30 adjacent to State Route 14 (SR-14), then turning northwesterly, crossing SR-14, and then into Section 19, Township 31 South, Range, then turning north within Section 19 and terminating in Section 18 of Township 31 South, Range 37 East.

Implementation of Alternative 4 was evaluated for potentially significant visual effects resulting from construction and operation of proposed wooden H-frame transmission structures.

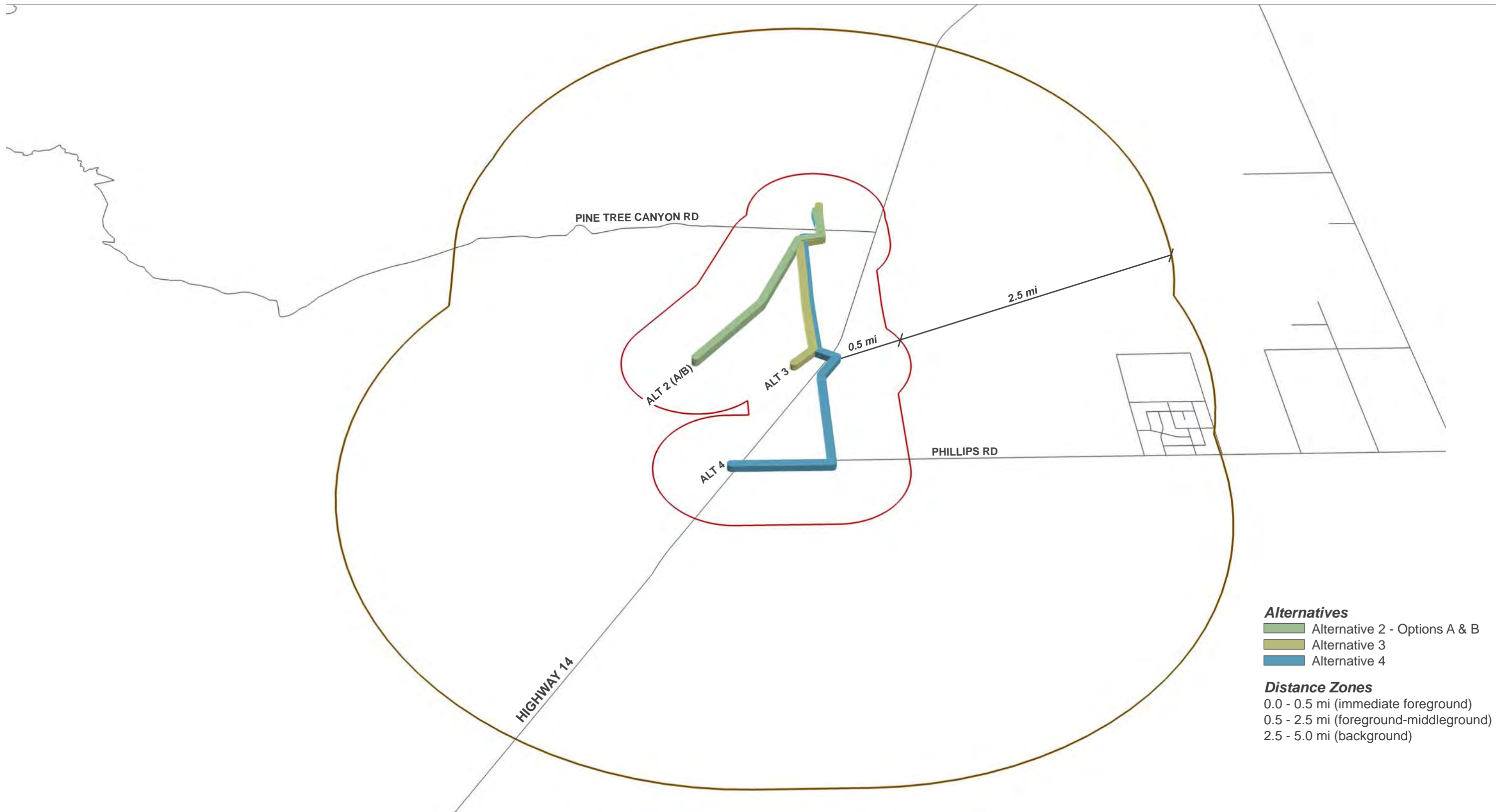


Figure 1
Proposed Action - Alignment Alternatives Map

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2.0 REGULATORY FRAMEWORK

2.1 Federal Regulations

National Environmental Policy Act (NEPA)

The NEPA of 1969, as amended (P.L. 91-190), 42 USC 4321 and 4331-4335) states purposes are “To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality” (USC 1970). The following sections of the NEPA relate to the visual landscape and to aesthetics:

(Section 101-b) “In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

(2) “assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;”

(Section 102-2) “all agencies of the Federal government shall...

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man’s environment;”

(B) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the visual landscape, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,”

Federal Land Policy and Management Act, as amended

The FLPMA of 1976 (90 Stat. 2743; 43 USC 1601, et seq.) established the BLM as the jurisdictional agency for expanses of land in the West to be managed as multiuse lands. The following sections of the FLPMA relate to the management of visual resources on federal lands:

§ 102(a): “The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.”

§ 201(a): “The Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including...scenic values).”

§ 202(c)(1-9): "...in developing land use plans, the BLM shall use...the inventory of the public lands; consider present and potential uses of the public lands, consider the scarcity of the values involved and the availability of alternative means and sites for realizing those values; weigh long-term benefits to the public against short term benefits."

§ 505(a): "Each right-of-way shall contain terms and conditions which will ... (ii) minimize damage to the scenic and esthetic values" (BLM 2001).

National Historic Preservation Act (NHPA)

The NHPA includes language protecting the visual integrity of sites listed or eligible for the National Register of Historic Places: "Examples of adverse effects...include...introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features..." (36 CFR Part 800.5). Impacts to visual resources protected by the NHPA are discussed in the Project EA, Cultural and Historic Resources.

Bureau of Land Management

The BLM manages land under its jurisdiction according to the goals and policies outlined in the RMPs. Visual Resource Management (VRM) classifications are developed by BLM, based on landscape character, scenic quality, sensitivity levels, distance zones, and management direction as outlined in BLM Manual H-8410 (BLM 1986). Each of four VRM classes has an objective that prescribes the amount of change allowed in the characteristic landscape based on perception by the public: Class I-no change; Class II-minor change; Class III-moderate change; and Class IV-major change (BLM 1986). Compliance with VRM classes is determined by comparison of the objective of the applicable class with the effects of the Proposed Action.

2.2 State Regulations

California Desert Conservation Area Plan, as amended

The Ridgecrest Field Office is part of the California Desert District, which is included in the California Desert Conservation Area (CDCA). The California Desert Conservation Area Plan 1980 As Amended (1999) states in Chapter 3, Recreation Element, Visual Resources Management Program page 72 that:

- "Appropriate levels of management, protection, and rehabilitation on all public lands in the CDCA will be identified, commensurate with visual resource management objectives in the multiple-use class guidelines."
- "Proposed activities will be evaluated to determine the extent of change created in any given landscape and to specify appropriate design or mitigation measures using the Bureau's contrast rating process."

West Mojave Plan

The West Mojave Plan Record of Decision (2006) and the Final Environmental Impact Report and Statement for the West Mojave Plan (2005) do not include regulations or standards pertaining to visual resources.

2.3 Kern County Policy

The Project is located within unincorporated Kern County, CA.

Kern County General Plan

Kern County has the discretion to designate local scenic routes if circumstances warrant such designation (Kern County General Plan - Circulation Element, 2007). A Scenic Route is any freeway, highway, road, or other public right-of-way, which traverses an area of exceptional scenic attractiveness. A scenic route must officially set as a Scenic Route by the Kern County Board of Supervisors, or the State of California. A route shall not be selected as scenic until a plan and program for the protection and enhancement of the adjacent roadside view shed is available for implementation.

Implementation Measure D: The County has adopted a Scenic Corridor (SC) Combining District to designate areas which contain unique visual and scenic resources as viewed from a major highway or freeway and for the regulation of off-site advertising signs, where the siting of such signs need to be reviewed on a case-by-case basis to safeguard the scenic qualities of the natural environment and the visual qualities of primary entranceways into the County.

3.0 METHODOLOGY

3.1 Visual Resources Inventory (VRI)

The methodology used to establish landscape scenery and sensitive viewers inventory and mapping for the Proposed Action included manual-digitizing from detailed aerials, data download from USGS, GIS spatial analyses, and field verification.

Land surface modeling was used to delineate landscape scenery rating units for the landscape scenery inventory. These scenery quality rating units were evaluated based on landform, water, vegetation, geology, land use and land cover sources and digital terrain data.

Sensitive viewers' locations, including residences and recreation sites, were manually-digitized in all areas within a 5-mile corridor. Trails and roads were also included in the inventory. Project-specific visibility and distance zone analyses and mapping were conducted in GIS (ArcGIS).

Field investigation was conducted to discover and disclose the relationships of project elements with existing onsite landscape characteristics and locations of sensitive viewers.

Landscape Scenery

Landscape scenery for the Proposed Action portrays the aesthetic value of landscapes on BLM, private, and state lands. Scenic quality is defined by the BLM as the visual appeal of a tract of land (BLM 1986). BLM lands are rated Class A, Class B, and Class C, for highest to lowest scenic quality. View distance, vegetation, topographic slopes, and characteristic landscape (particularly, the presence or absence of existing cultural modifications), play important roles in the assessment of change caused by the Proposed Action on landscape scenery.

Sensitivity Levels

Sensitive viewers' analysis for the Proposed Action encompasses public and private viewer's concern for landscape scenery. Sensitivity levels are defined by the BLM as the measure of public concern for scenic quality. Public lands are assigned high, medium, or low sensitivity levels (BLM 1986).

Distance Zones

Distance zones are defined by the BLM as relative visibility from travel routes or observation points. The three zones are foreground-middleground, background, and seldom seen. All BLM Field Offices' visual resource inventories show all distance zones as foreground-middleground throughout the field office. The foreground-middleground zone includes areas seen from highways, roads, trails, rivers, or other viewing locations that are less than 3 to 5 miles away. Seen areas beyond the foreground-middleground zone, but usually less than 15 miles away, are in the background zone. Areas not seen (hidden from view) in the foreground-middleground or background are designated as seldom-seen (BLM 1986).

Visual Resource Inventory Classes

VRI classes represent the relative value of the visual resources and provide the basis for considering visual values in the resource management planning process. VRI Classes II, III, and IV are determined based on a combination of scenic quality, sensitivity level, and distance-zone overlays. Class II has a higher level of value than Class III, which is moderately valued. Class IV is the least valued. A fourth VRI class, Class I, is assigned to special management areas. This includes Wilderness Areas or Wilderness Study Areas, Wild and Scenic Rivers, National Recreation Areas and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape.

Where BLM VRI Classes have not been established or are pending acceptance, Interim BLM VRI Classes are required. At present, no BLM Classes have been established for the lands potentially impacted by, or for those surrounding the Proposed Action. However, an Interim VRI Class was previously established and approved for the purposes of the Barren Ridge Renewable Transmission Project (BRRTP); a project with direct adjacency and relevance to the Proposed Action. Given the congruencies, the Interim VRI Classification approved in the *Barren Ridge Renewable Transmission Project Visual Resources Technical Study* (POWER Engineers, Inc. (POWER), 2011) was obtained from the BLM, independently field-verified, and ultimately adopted by this document as the basis of relative visual value in the project area. The methodology used to establish this Interim VRI Class was excerpted from the BRRTP Visual Resources Technical Study, as approved, and provided below.

The visual resources inventory consisted of the following sequence of study components:

- Identification of agency management objectives (BLM VRM classes and USFS SIOs) and scenic attractiveness classifications if available (ANF Landscape Units and Scenic Attractiveness and BLM Scenic Quality Rating Units);
- A review of the regional physiography, landscape setting, landscape character, and an inventory of existing regional landform, vegetation and water features
- Development of scenic attractiveness/landscape rating units (where not established by agencies);
- Inventory of scenic attractiveness and visual quality within landscape rating units (where not established by agencies);

- Identification and mapping of sensitive viewpoints (USFS Travelways and Use Areas, and BLM Key Observation Points); Sensitivity analysis of identified sensitive viewpoints (where not established by agency, i.e. USFS concern levels); and Visibility and distance zone mapping (USFS Seen Areas and Distance Zones and BLM Mapping Distance Zones).

Source: ANA-032-153 (PER-02) BRRTP (AUGUST 2011) GF 115244, Page 29, POWER Engineers, Inc.

3.2 Agency Management Objectives and Local Planning

The RMP land use planning process results in VRM class assignments for all BLM-administered lands. The recent VRIs have not yet been included in the BLM RMPs. VRM classes (**Table 1**) are based on VRIs and management decisions that must take into consideration the value of visual resources. The BLM Manual 1601.03A(4) states, "...in developing land use plans, the BLM shall use ... the inventory of the public lands; consider present and potential uses of the public lands, consider the scarcity of the values involved and the availability of alternative means and sites for realizing those values; weight long-term benefits to the public against short term benefits."

Table 1 BLM Visual Resource Management Class Objectives

Class I Objective	The objective of this class is to preserve the existing character of the landscape. Changes to the landscape character should not be evident.
Class II Objective	The objective of this class is to retain the existing character of the landscape. Changes to the landscape character may attract slight attention but should be subordinate to the visual setting.
Class III Objective	The objective of this class is to partially retain the existing character of the landscape. Changes to the landscape character may begin to attract attention but should not dominate the visual setting.
Class IV Objective	The objective of this class is to allow for activities that modify the existing character of the landscape. Changes to the landscape character may attract attention and dominate the visual setting. However, these activities should minimize changes to the landscape where possible.

Source: BLM 1986.

3.3 Contrast Rating Analysis

The visual resource contrast rating is a systematic process used to analyze the potential visual impact of the Proposed Action. The degree to which an activity affects the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape.

3.4 Study Procedure

Overall analysis considerations are described in **Table 2**. The analysis of visual resources impacts to the visual landscape (land, people, and exposures) is based on the assumptions that degradation of public views and degradation in the scenic landscape are impact parameters that would affect how the public engages or interacts with a visual resource. In addition, non-compliance or inconsistency with agency management objectives indicates need for agency concern about land use plan conformance for visual resources.

Transmission line structures and conductors can often create visual contrasts out to 5 miles in project landscapes, depending on sun-lighting conditions and relative viewer positions. Vegetation management, which includes vegetation removal in linear ROWs, can exert visual contrasts up to 20 miles in arid, scrub-covered landscapes. These contrasts remain until

decommissioning and replanting or feathering of the ROW. Visual contrasts from vegetation management in landscapes without tree cover would remain until grasses and shrubs re-inhabit disturbed areas; typically diminishing within 3 to 5 years.

Table 2 Analysis Considerations for Visual Resources

Topic	Analysis Considerations and Relevant Assumptions
Impacts to people (viewing public)	Measure the extent of and describe the effects of the Proposed Action's structures and disturbed ROWs on people through spatial analysis of BLM's visual resource inventory sensitivity levels and distance zones.
Impacts to the scenic landscape	Measure the extent of and describe the effects of the Proposed Action's structures, cleared ROWs, and access roads on the scenic landscape through spatial analysis of BLM's visual resource inventory scenic quality classifications.
Compliance or consistency with Agency Management Objectives	Apply the BLM's visual contrast rating process and forms for views from key observation points to describe the form, line, color, and texture of the characteristic landscape's landform/water, vegetation, and structures and the form, line, color, and texture of the Proposed Action's landform/water, vegetation, and structures. Compare the Proposed Action with the characteristic landscape to determine visual contrasts between proposed conditions and existing conditions. Visual contrast determination includes application of BLM's nine standard criteria for assessing visual contrasts.

The greatest impacts to visual resources would result if any of the following were to occur from construction or operation of the Proposed Action:

- Visually obvious degradation of the foreground character or scenic quality of a visually important landscape.
- Dominant visual changes in the landscape that are seen from highly sensitive viewer locations in the visual landscape such as community enhancement areas (e.g., community gateways, roadside parks, viewpoints and historic markers) or locations with special scenic, historic, recreation, cultural, archaeological and/or natural qualities that have been recognized as such through legislation or some other official declaration.

A threshold of concern for land use plan conformance for visual resources would result if the following were to occur from construction or operation of the Proposed Action:

- Impacts to visual resources that are not in compliance with the adopted BLM VRM classifications.

The ten standard BLM criteria for ways people will be exposed and the attention afforded to visual contrasts were interpreted for applicability for a transmission line and ancillary facilities and reduced to nine criteria. Those remaining nine criteria are as follows: 1) the distance between observer and Proposed Action; 2) length of time the project is in view (linear or stationary viewers – KOPs); 3) the angle of observation; 4) whether the structures and conductors are sun lit (brighter, lighter grays) or in shade (darker, less apparent grays); 5) the presence of guyed, steel lattice tangent structures or larger self-supported, steel lattice angle structures; 6) types of structures in view; 7) relative size or scale; 8) scenic or historic; 9) presence of residential; and 10) reclamation recovery time.

Landscape scenery impacts (**Table 3**) are determined based on the comparison of change caused by the project with the scenic quality inventory of the affected environment. The results

are based on consideration of existing scenic quality rating/scores, existing landscape character, presence or absence of existing industrial development (transmission lines, pipelines, etc.), and the effect of introducing the Proposed Action into the landscape as either a new or additional cultural modification.

Table 3 Landscape Scenery Impacts

Scenic Quality	Proposed Action's Visual Change		
	Strong	Moderate	Weak
Class A	High	High	Moderate
Class B	High	Moderate	Low
Class C	Moderate	Low	Low

Sensitive viewers' impacts were determined based on the comparison of change caused by the Proposed Action with sensitivity/user concern levels, distance zones (0 to 0.5 mile, 0.5 to 2.5 miles, 2.5 to 5 miles, and greater than 5 miles) (**Table 4**), and visibility of the Proposed Action (**Table 5**).

Table 4 Sensitivity Level Impacts

High Viewer Sensitivity Impacts			
Project Visibility	Proposed Action's Visual Change		
	Strong	Moderate	Weak
0 - 0.5 miles	High	Moderate	Moderate
0.5 – 2.5 miles	Moderate	Moderate	Low
2.5 – 5 miles	Moderate	Low	Low
Greater than 5 miles	Low	Low	Low
Medium Viewer Sensitivity Impacts			
0 - 0.5 miles	High	Moderate	Moderate
0.5 – 2.5 miles	Moderate	Low	Low
2.5 – 5 miles	Low	Low	Low
Greater than 5 miles	Low	Low	Low

Table 5 Distance Zones and Project Visibility

Distance Zones and Structure Visibility	
Distances	Distance from Proposed Action
Immediate Foreground	0 - 0.5 miles
Foreground-Middleground	0.5 – 2.5 miles
Background	2.5 – 5 miles
Seldom Seen	Greater than 5 miles
Distance Zones and ROW Visibility	
Immediate Foreground	0 - 0.5 miles
Foreground-Middleground	0.5 – 5 miles
Background	5 – 20 miles
Seldom Seen	Greater than 20 miles

General visual impact levels are outlined below in **Table 6**. Impacts to landscape scenery were determined by measuring the extent of effects of the Proposed Action's structures, access roads, and disturbed ROWs on the scenic landscape through spatial analysis of BLM's visual resource inventory and visual quality classifications.

Impacts to viewers were determined by measuring the extent of effects introduced by the Proposed Action including: structures, access roads, and disturbed ROWs on people through spatial analysis of BLM's visual resource inventory, sensitivity levels and distance zones.

Table 6 Impact Level Criteria

Impact	Criteria
High	The Proposed Action would be dominant in Class A or Class B landscape scenery. The Proposed Action would be visible within 0.5 miles of high sensitivity viewers.
Moderate	The Proposed Action would be co-dominant in Class B landscape scenery. The Proposed Action would be visible within 0.5 to 2.5 miles of medium sensitivity viewers.
Low	The Proposed Action would be dominant or co-dominant in Class C landscape scenery. The Proposed Action would be visible in greater than 2.0 miles of medium sensitivity viewers. The Proposed Action would parallel and be co-dominant with existing transmission line features.

Compliance with BLM VRM objectives was determined by comparison of objectives with visual contrast ratings from 3 KOP, evaluating the 4 proposed build alternatives. The agency management objectives compliance criteria are summarized in the Impacts sections by alternative. General BLM compliance criteria are summarized below in **Table 7**.

Table 7 BLM Compliance Criteria

VRM	Criteria
No	The Proposed Action would have a high or moderate contrast with VRM Class II objectives. The Proposed Action would have a high contrast in areas with VRM Class III objectives. The Proposed Action would have a moderate contrast in areas with VRM Class III objectives.
Yes	The Proposed Action would have a low contrast in areas with VRM Class III objectives. The Proposed Action would have a moderate contrast in areas with VRM Class IV objectives. The Proposed Action would be in VRM Class IV

4.0 VISUAL RESOURCES INVENTORY

4.1 Landscape Scenery

BLM lands are rated Class A, Class B, and Class C, for highest to lowest scenic quality, and are qualified by view distance, vegetation, topographic slopes, and characteristic landscape (particularly, the presence or absence of existing cultural modifications). Each of these components plays important roles in the assessment of change caused by the Proposed Action on landscape scenery.

As noted in **Section 3.1**, in the interest of continuity, previously approved Interim BLM VRM Classifications have been adopted by this document from the BRRTP Visual Resources Technical Report (VRTP), August 2011 prepared by POWER Engineers, Inc.

On page 55, Section 4.2.1 of the BRRTP – VRTP, POWER concluded that the existing scenic quality rating for Private Lands and Public Lands Managed by the BLM directly impacted by or adjacent to the Proposed Action is that of a **Class C** landscape. AECOM has independently field-verified this conclusion and is in concurrence.

As such, a **Class C** Scenic Quality rating classifies the surrounding landscape as “common areas where characteristic features have little variation in form, line color, or texture in relation to the surrounding region” – and would apply to the entirety of the Proposed Action’s project area.

4.2 Viewer Sensitivity Levels

Sensitive viewers’ analysis and mapping for the Proposed Action encompasses public and private viewer’s concern for landscape scenery. Sensitivity levels are defined by the BLM as the measure of public concern for scenic quality. Public lands are assigned high, medium, or low sensitivity levels (BLM 1986).

On page 13 of Appendix A, Table A-8 of the BRRTP – VRTP, POWER concluded that vehicular viewer sensitivity is **High** along SR 14, an eligible State Scenic Highway, due to a: 1. High level of user concern; 2. Short duration of view; and 3. High volume of viewers. AECOM has independently verified this conclusion and is in concurrence.

Additionally, viewer sensitivity for recreational viewers in the vicinity of the Proposed Action would be **Moderate**, due to a: 1. Moderate level of user concern; 2. Short duration of view; 3. Low volume of viewers; and 4. Existing transmission structures in foreground views.

4.3 Distance Zones and Project Visibility

These distances and viewsheds, which are integral to the Viewer Sensitivity analyses, were determined by evaluating the viewsheds of nearby travel routes and vistas in the project vicinity, including but not limited to:

- State Route 14 (SR 14)
- Pine Tree Canyon Road
- BLM Off-Highway Recreational Trails / LADWP right-of-way

Combined, these areas comprise the overall project viewshed, depicted in **Figure 2**.

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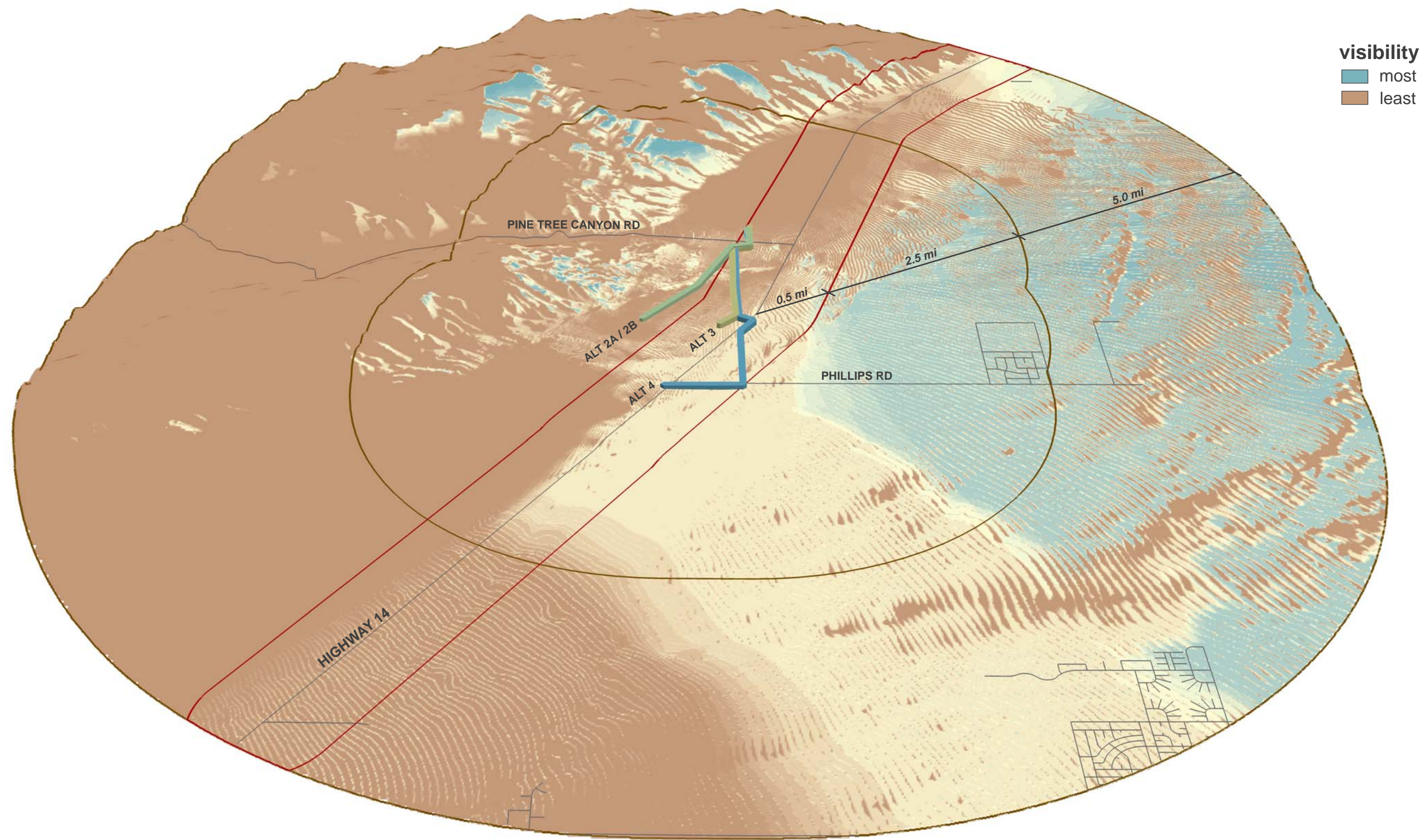


Figure 2
Project Viewshed Map

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4.4 Regional Landscape Setting

The visual setting is framed by the silhouette of pyramidal ridgelines appearing distinctly against the sky and rolling topography of the adjacent, scrub-covered transitional slopes. The visual texture of the study area is moderately coarse; with varying vegetation densities including smooth patches (formed by breaks in the vegetation and exposed soils). Colors in this landscape tend to be muted, with tans, grays, and greens dominating existing palette.

Though generally covered by high desert vegetation, the undulating topography throughout the project area and valley at-large is occasionally interrupted by a denuded wash or existing access road; providing texture and naturally-occurring visual contrast in the landscape. Seasonal warmth and color contrasts provided by reds and oranges influence this visual experience at varying times of year, but most frequently, large expanses of undeveloped, vegetated open space allow those areas remaining unvegetated to stand in strong contrast against the surroundings.

Beyond the scenic landscape, several cultural modifications encroach on the study area within, most notably State Highway 14, the existing Barren Ridge renewable transmission corridor and the LADPW Barren Ridge Switching Station. Both recent and historically cleared rights-of-way add to the visual evidence of human-made interventions on the land, and all provide moderate to strong sources of existing visual contrast in the landscape.

4.5 Key Observation Points (KOPs)

To better understand existing conditions and potential viewer response, key observation points, or KOPs were selected based on a composite evaluation of the preceding project and corridor analyses. Because it was not feasible to analyze all views of the Project, three KOPs were selected for their ability to simultaneously represent existing conditions *and* authentically depict the effects of implementation.

These views established a baseline visual condition to which potential change was compared. The chosen KOP locations are identified in **Figure 3**. Based on the chosen location, a KOP Viewshed analysis was prepared to verify the efficacy of chosen view locations. Efficacy was evaluated through the digital visibility modeling process described below:

- a. A digital terrain model was developed from Applicant-furnished materials including: field-verified topographical contours, 3-dimensional proposed civil grading plans, and a 3-dimensional architectural model.
- b. Geospatially accurate observer points were created and programmed to match digital camera metadata including: bearing, inclination, tilt, elevation, and focal length.
- c. Observer points were placed in the digital terrain model using the GPS data of selected Key Views.

Unlike viewshed analyses, whose results are measured as a range of potential visibility (i.e., most visible to least visible), the results of view-specific visibility was scored as absolute (i.e. visible or not visible). This technique ensured the chosen viewpoint could authentically represent both the viewing public, and the Project. The results of this analysis are demonstrated graphically in **Figure 4**.

KOP 1

KOP 1 is located within an existing LADPW Right-of-Way, along a BLM-designated OHV trail approximately 0.61 miles north Phillips Road/SR 14 intersection and approximately 0.79 miles west of SR 14. The KOP is roughly 0.25 miles west of Alternative 2, and 20 feet from the existing Barren Ridge Renewable Transmission Project (BR RTP) alignment. From this elevated position, unobstructed immediate foreground and foreground-middleground views of the existing BR RTP and Proposed Action are visible. KOP 1 also affords unobstructed background views of the surrounding desert landscape, but is typical of views in this region of the desert. KOP 1 is depicted in **Figure 5**.

KOP 2

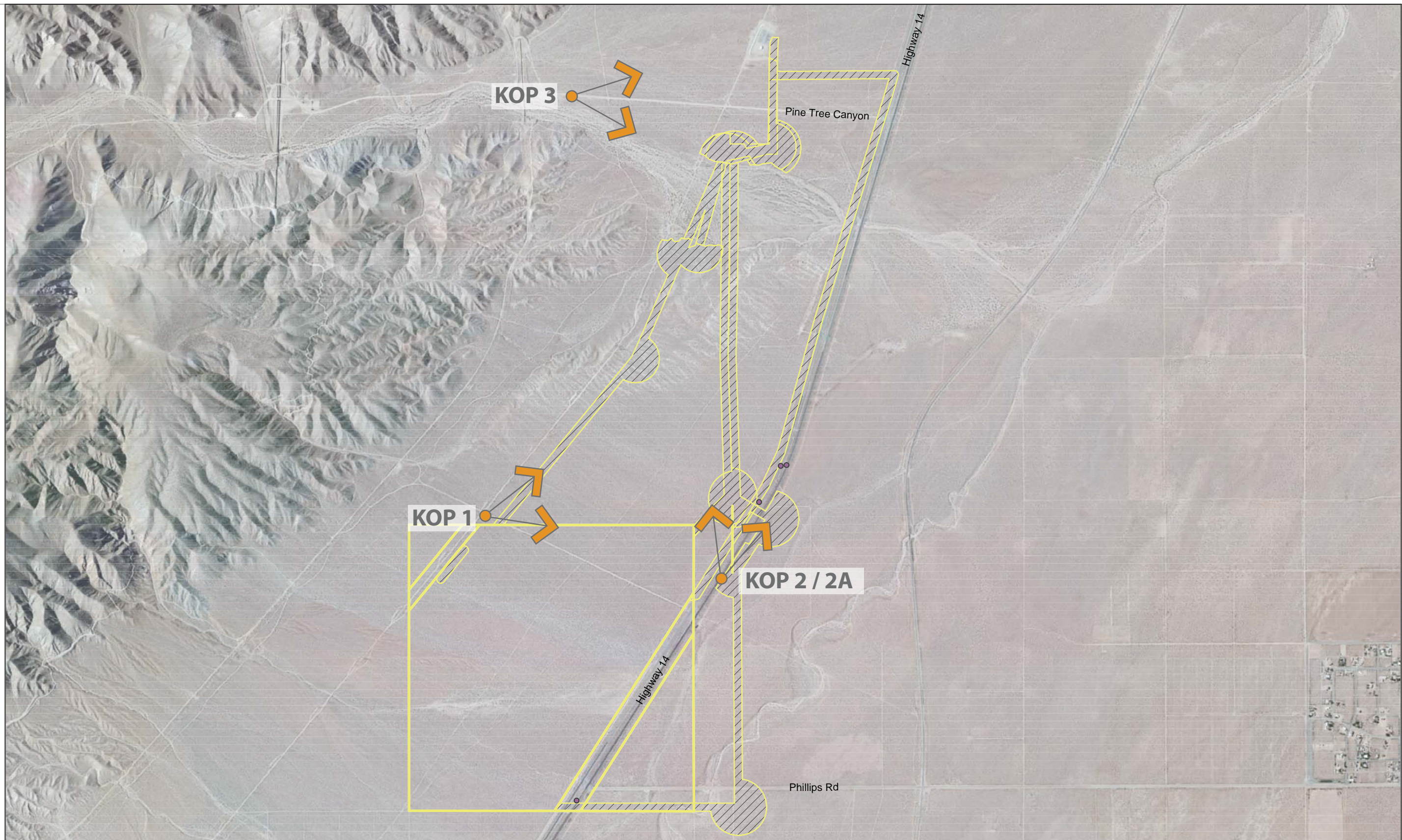
KOP 2 is located along the northbound lanes of SR 14, approximately 0.76 miles north of Phillips Road. The view from this location is characterized by immediate foreground and foreground-middleground views of existing cultural modifications including SR 14, the BR RTP, and cleared ROWs, as well as the existing undeveloped desert landscape. Viewers have unobstructed background views of the mountain range to the west and the scrub-covered alluvial landform below. The view represented by KOP 2 is typical of those in this of the desert region and possesses few unique or memorable visual elements. KOP 2 is depicted in **Figure 6**.

KOP 2A

KOP 2A is located along the northbound lanes of SR 14, approximately 0.76 miles north of Phillips Road. Views facing north along this corridor are long and unobstructed; providing immediate foreground and foreground-middleground views of existing cultural modifications including SR 14, the BR RTP, cleared ROW, and natural landscape features including tall mountain peaks to the west and more uniform scrub-covered alluvial landform moving east. Background views of the surrounding mountain range provide viewers a sense of topographical enclosure. The view represented by KOP 2A is typical of the experience traveling along SR 14; visually repetitious and possessing few unique or memorable visual elements. KOP 2A is depicted in **Figure 7**.

KOP3

KOP 3 is located on Pine Tree Canyon Road, approximately 0.61 miles north of the existing LADPW Barren Ridge Switching Station and Barren Ridge Renewable Transmission Project. The KOP is roughly the same distance from the northern terminus of the Proposed Action; directly aligned with the proposed crossings of Pine Tree Canyon Road and Pine Tree Wash. The view represented by KOP 3 is typical of the visual experience in the region and possesses few unique or memorable visual elements beyond those contributed by the BR RTP or Barren Ridge Switching Station themselves. KOP 3 is depicted in **Figure 8**.



Source: 2013 Google Earth; Imagery Date 8/25/2012

Figure 3
VRI and KOP Location Map

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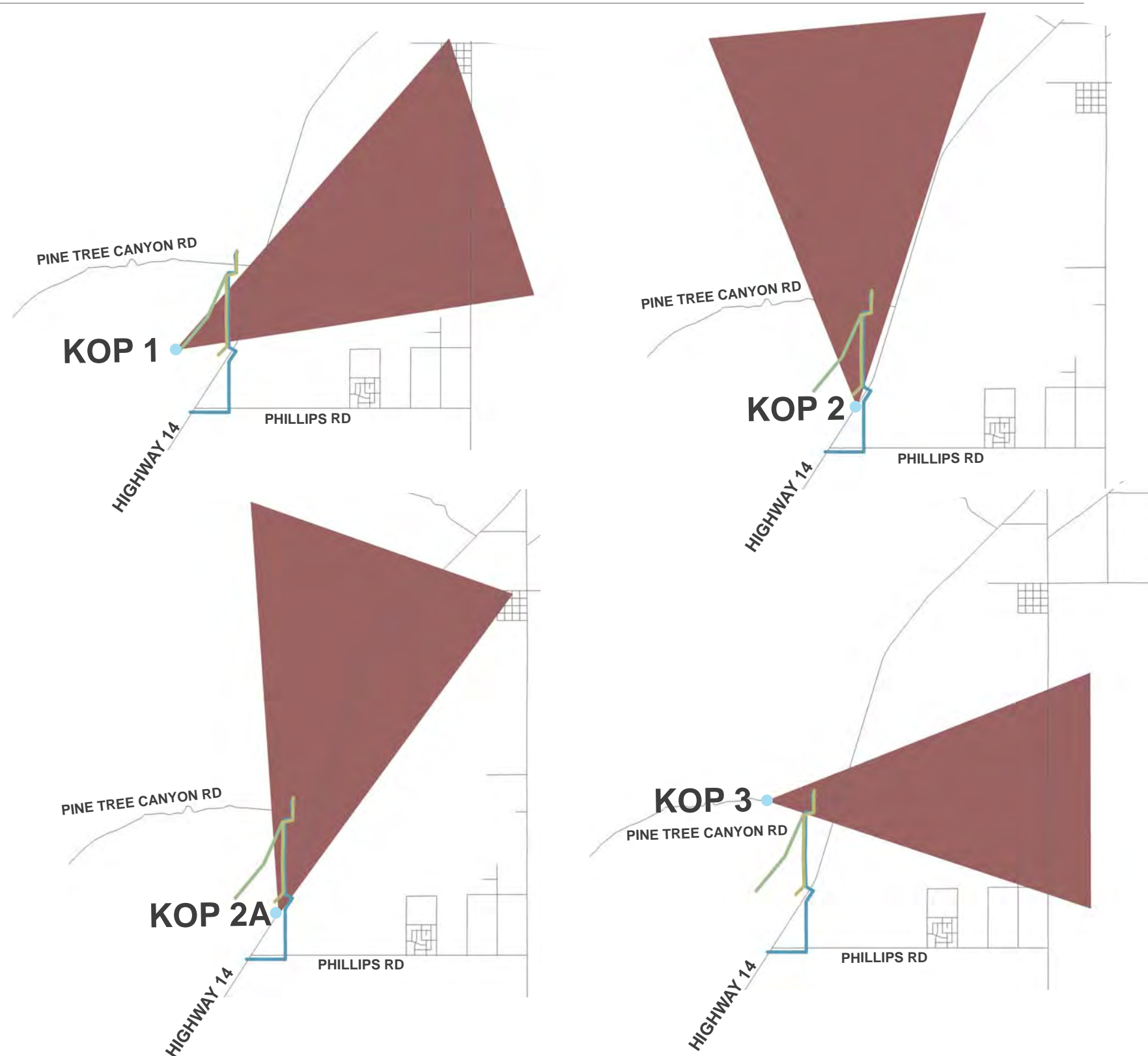
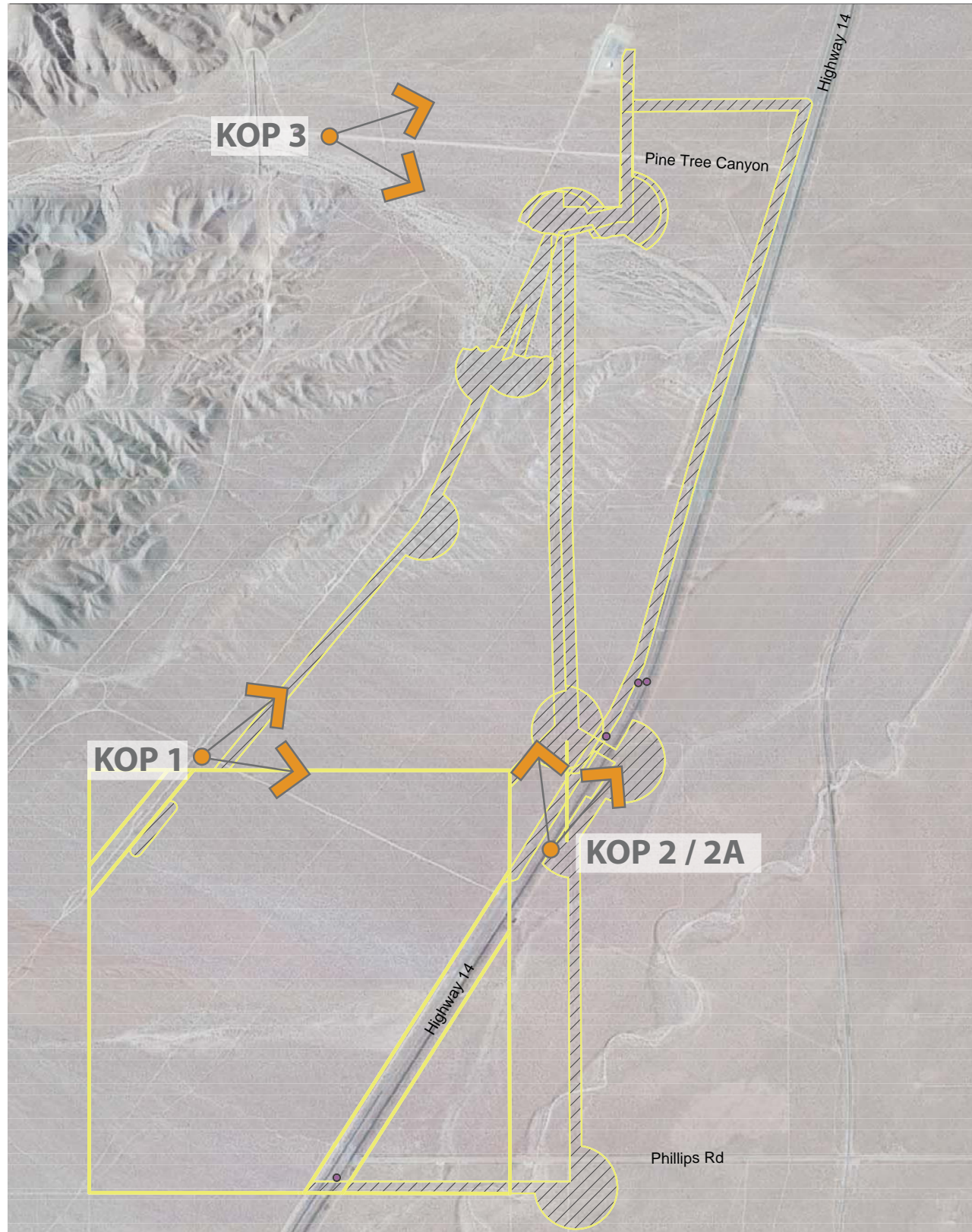


Figure 4
KOP Viewshed Map

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Figure 5
KOP 1 - Existing Visual Conditions

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Figure 6
KOP 2 - Existing Visual Conditions

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Figure 7
KOP 2A - Existing Visual Conditions

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Figure 8
KOP 3 - Existing Visual Conditions

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5.0 CONTRAST RATING AND IMPACT RESULTS

5.1 Impacts Common to all Alignment Alternatives

Construction Impacts

Visual resources in the visual landscape would be affected by transmission line construction due to the activities necessary to build the transmission and related facilities. Viewshed disturbance, including project visibility in the visual landscape, includes the addition of self-supporting steel lattice structures or wooden H-frame structures, conductors, cleared ROWs, temporary buildings, fences, and construction-related equipment, debris storage, and ground areas cleared for construction, such as access roads, transmission line tower work areas, conductor stringing and tensioning sites, material storage yards, staging areas, ground electrode systems, and three electrical lines.

Direct impacts to people and scenery in the visual landscape would occur from visual changes to the context of the visual landscape, or modifications of the characteristic landscape, and/or from introductions of contrasting forms, lines, colors and textures of landform, vegetation, and structures needed to accommodate construction activities.

In undeveloped areas, impacts to the visual landscape caused by pyramidal forms of structures, vertical and horizontal lines of structures and conductors, silvery-grey and tan (ROW) colors, and smooth textures would result from multiple steel lattice structures along the tangents, and vegetation clearing, fences, and roads. In viewsheds with existing electrical transmission line structures and ground disturbances, contrasts would be weak to moderate, depending on distance from the observer and number and type of structures. In all cases, construction activities occurring in the immediate foreground of the observer would cause greater contrasts and/or impacts to the visual landscape than those appearing at a further distance.

In the short term of construction, direct impacts to people and scenery in the visual landscape is anticipated to be moderate to high and contrasts would comply with BLM VRM Class IV management objectives. Project construction activities, as discussed previously, that are located within 0.5 mile of high or moderate sensitivity viewers and have strong or moderate contrasts and/or impacts to the visual landscape, would not be expected to comply with BLM VRM Class III objectives. Mitigations involving project facilities constructed at distances greater than 0.5 mile from stationary and linear KOPs typically would reduce visual contrasts to moderate and, therefore, result in compliance with VRM Class III management objectives.

Operation Impacts

Visual resources would be impacted during the operation of the Proposed Action due to contrasts from self-supporting steel lattice structures, terminal facilities, ground electrode facilities, and disturbance by cleared ROWs, permanent access roads and other areas of ground or vegetation disturbance. Direct impacts to viewsheds similar to those discussed for the construction phase would be expected.

Indirect viewshed impacts would result from disturbance by human recreational activities, artifacts of activities, and vehicles with access to scenic landscapes by the Proposed Action's permanent access roads. Indirect impacts during operation would be expected to comply with agency management objectives in BLM VRM Class III management objectives. Due to effects of implementation, indirect impacts in the immediate foreground 0.5 mile from sensitive viewers

may not comply with BLM VRM Class III management objectives. It is expected these impacts would be mitigated as much as possible on a case-by-case basis.

Decommissioning Impacts

Impacts to visual resources during the decommissioning phase of the Proposed Action would be similar to construction impacts.

5.2 Impacts from Alternative 2 (Applicant's Preferred Alignment)

Due to visual compatibility of the Proposed Action with existing electrical utility structures and developments, the casual observer (viewers in the visual landscape) would not consider visual quality to be substantially diminished. As such, impacts to the visual landscape and to Class C scenery would be low. Proposed Action elements would have weak to moderate contrast with the existing landscape.

Given the limited visibility of the Proposed Action by the casual observer, impacts to the visual landscape would be low. Project elements would have low to moderate contrast with the existing characteristic landscape due to cylindrical and pyramidal forms, vertical and horizontal lines of structures and conductors, silvery-grey and tan colors, smooth textures resulting from the structures of the terminal site, multiple guyed steel lattice structures along the tangent near the terminal site, self-supporting steel lattice structures, fences, and vegetation clearing for roads. Visual effects resulting from implementation of Alternative 2A – Wooden H-frame Option Alternative 2B – Steel Lattice Option and are depicted in visual simulations in **Figures 9-10; 13-14; and 17-18.**

Since the color of terminal materials would cause contrasts with the characteristic landscape and also emphasizes form, line, and texture contrasts of those materials, application of mitigation **VR-1 (Section 7.0)** for the surfaces of terminal and ground electrode structures, tanks and fencing would mitigate contrasts to a weak to moderate level for the terminal in this landscape. Implementation of mitigation **VR-7 (Section 7.0)** lighting guidelines would reduce night-time glare to minimal levels, minimally noticeable in the visual landscape.

5.3 Impacts from Alternative 3 (Alternative BLM Land Alignment)

Direct impacts to people and scenery in the visual landscape are anticipated to be moderate to high and contrasts would not comply with BLM VRM Class III management objectives in most cases. Project features located within 0.5 mile of high sensitivity viewers along SR 14 have strong contrasts on Class C scenic quality and impacts from the proposed Gen-Tie would not be anticipated to comply with BLM VRM Class III objectives. The wooden H-frame structures associated with Alternative 3 are depicted in visual simulations in **Figures 11, 15, and 19.**

5.4 Impacts from Alternative 4 (Private Alignment)

Direct impacts to people and scenery in the visual landscape are anticipated to be moderate to high and contrasts would not comply with BLM VRM Class III management objectives in most cases. Project features located within 0-0.5 mile of high sensitivity viewers along SR 14, as well as those features directly adjacent to or diagonally crossing the corridor have strong contrasts and exert impacts that would not be anticipated to comply with BLM VRM Class III objectives. The wooden H-frame structures associated with Alternative 4 are depicted in visual simulations in **Figures 12, 16, and 20.**



Figure 9
KOP 1 - Alternative 2A - Visual Simulation

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Figure 10
KOP 1 - Alternative 2B - Visual Simulation

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Figure 11
KOP 1 - Alternative 3 - Visual Simulation

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Figure 12
KOP 1 - Alternative 4 - Visual Simulation

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Figure 13
KOP 2 - Alternative 2A - Visual Simulation

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Figure 14
KOP 2 - Alternative 2B - Visual Simulation

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Figure 15
KOP 2 - Alternative 3 - Visual Simulation

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Figure 16
KOP 2A - Alternative 4 - Visual Simulation

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Figure 17
KOP 3 - Alternative 2A - Visual Simulation

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Figure 18
KOP 3 - Alternative 2B - Visual Simulation

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Figure 19
KOP 3 - Alternative 3 - Visual Simulation

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Figure 20
KOP 3 - Alternative 4 - Visual Simulation

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5.5 Summary of Impacts

Landscape scenery impacts (**Table 8**) were determined based on the comparison of change caused by the project with the scenic quality inventory of the affected environment. The results are based on consideration of existing scenic quality rating/scores, existing landscape character, presence or absence of existing industrial development (transmission lines, pipelines, etc.), and the effect of introducing the Proposed Action into the landscape as either a new or additional cultural modification.

Table 8 Summary of Landscape Scenery Impacts

Scenic Quality	Proposed Action's Visual Change		
	Strong	Moderate	Weak
Class C	Moderate	Low	Low

Sensitive viewers' impacts were determined based on the comparison of change caused by the Proposed Action with sensitivity/user concern levels, distance zones (0 to 0.5 mile, 0.5 to 2.5 miles, 2.5 to 5 miles, and greater than 5 miles) (**Table 9**), and visibility of the Proposed Action (**Table 10**).

Table 9 Summary of Sensitivity Level Impacts

High Viewer Sensitivity Impacts (Vehicular Viewers, SR 14)				
Alternative	Project Visibility	Proposed Action's Visual Change		
		Strong	Moderate	Weak
3, 4	0 - 0.5 miles	High	Moderate	Moderate
2A, 2B, 3, 4	0.5 – 2.5 miles	Moderate	Moderate	Low
2A, 2B	2.5 – 5 miles	Moderate	Low	Low
N/A	Greater than 5 miles	Low	Low	Low
Medium Viewer Sensitivity Impacts (Recreational Viewers)				
2A, 2B, 3, 4	0 - 0.5 miles	High	Moderate	Moderate
2A, 2B, 3, 4	0.5 – 2.5 miles	Moderate	Low	Low
3, 4	2.5 – 5 miles	Low	Low	Low
N/A	Greater than 5 miles	Low	Low	Low

Table 10 Summary of Distance Zones and Project Visibility

Distance Zones and Structure Visibility		
Alternative	Distances	Distance from Proposed Action
3, 4	Immediate Foreground	0 - 0.5 miles
2A, 2B, 3, 4	Foreground-Middleground	0.5 – 2.5 miles
Distance Zones and ROW Visibility		
3, 4	Immediate Foreground	0 - 0.5 miles
2A, 2B, 3, 4	Foreground-Middleground	0.5 – 5 miles
2A, 2B, 3, 4	Background	5 – 20 miles

Visual impact levels are outlined by alternative in **Table 11**. Impacts to landscape scenery were determined by measuring the extent of effects of the Proposed Action's structures, access

roads, and disturbed ROWs on the scenic landscape through spatial analysis of BLM's visual resource inventory and visual quality classifications.

Impacts to viewers were determined by measuring the extent effects of the Proposed Action's structures, access roads, and disturbed ROWs on people through spatial analysis of BLM's visual resource inventory, sensitivity levels and distance zones.

Table 11 Summary of Impact Levels

Alternative	Impact	Criteria
3,4	High	The Proposed Action would be dominant in Class A or Class B landscape scenery. The Proposed Action would be visible within 0.5 miles of high sensitivity viewers.
2A, 2B, 3, 4	Moderate	The Proposed Action would be co-dominant in Class B landscape scenery. The Proposed Action would be visible within 0.5 to 2.5 miles of medium sensitivity viewers.
1, 2A, 2B	Low	The Proposed Action would be dominant or co-dominant in Class C landscape scenery. The Proposed Action would be visible in greater than 2.0 miles of medium sensitivity viewers. The Proposed Action would parallel and be co-dominant with existing transmission line features.

Compliance with BLM VRM objectives was determined by comparison of objectives with visual contrast ratings from 3 KOP, evaluating the 4 proposed build alternatives. The agency management objectives compliance criteria are summarized in the Impacts sections by alternative. The relevant BLM VRM Objective is outlined below in **Table 12**, and BLM compliance criteria is summarized below, by alternative, in **Table 13**.

Table 12 Relevant BLM VRM Objective

VRM Class	Objective
Class III Objective	The objective of this class is to partially retain the existing character of the landscape. Changes to the landscape character may begin to attract attention but should not dominate the visual setting.

Table 13 Summary of BLM Compliance

Alternative	VRM	Criteria
3, 4	No	The Proposed Action would have a high or moderate contrast with VRM Class II objectives. The Proposed Action would have a high contrast in areas with VRM Class III objectives. The Proposed Action would have a moderate contrast in areas with VRM Class III objectives.
1, 2A, 2B	Yes	The Proposed Action would have a low contrast in areas with VRM Class III objectives. The Proposed Action would have a moderate contrast in areas with VRM Class IV objectives. The Proposed Action would be in VRM Class IV

6.0 PROJECT DESIGN FEATURES AND BEST MANAGEMENT PRACTICES

6.1 BLM

A. The site design should be integrated with the surrounding landscape.

- To the extent practicable, the operator should avoid placing substations or large operations buildings on high land features and along “skylines” that are visible from nearby sensitive viewpoints. The presence of these structures should be concealed or made less conspicuous. Conspicuous structures should be designed and constructed to harmonize with desirable or acceptable characteristics of the surrounding environment (Gipe, 2002).
- The operator should bury power collection cables or lines on the site in a manner that minimizes additional surface disturbance.
- Commercial symbols (such as logos), trademarks, and messages should not appear on sites or ancillary structures. Similarly, billboards and advertising messages should also be prohibited (Gipe, 1998, 2002).

B. Operators should minimize disturbance and control erosion by avoiding steep slopes (Gipe, 1998) and by minimizing the amount of construction and ground clearing needed for roads, staging areas, and crane pads. Dust suppression techniques should be employed in arid environments to minimize impacts of vehicular and pedestrian traffic, construction, and wind on exposed surface soils. Disturbed surfaces should be restored as closely as possible to their original contour and revegetated immediately after, or contemporaneously with construction. Action should be prompt to limit erosion and to accelerate restoring the preconstruction color and texture (contrast) of the landscape.

6.2 Renewable Energy Action Team

The following guidelines from Best Management Practices & Guidance Manual: Desert Renewable Energy Projects - Draft Staff Report (CEC-700-2009-016-SD), October 2009.

DREP Chapter 2: Visual Resources

Reduce visual impacts during construction by minimizing areas of surface disturbance, controlling erosion, using non-chemical dust suppression techniques, and restoring exposed soils as closely as possible to their original contour and vegetation. Guidelines specifically applicable to the Proposed Action are the following:

- 3) Color and finish surfaces of all project structures and buildings visible to the public to ensure they minimize visual intrusion and contrast and minimize glare. Paint grouped structures the same color to reduce visual complexity and color contrast.
- 4) Establish a regular litter pick-up procedure within and around the perimeter of the project site.

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7.0 MITIGATION MEASURES

Mitigation measures were developed to reduce the potential for adverse effects to visual resources. Given the nature of the Proposed Action, only mitigation measures determined to be effective in reducing impacts were recommended, and were considered so if they:

- reduce the level of dominance the Proposed Action may have in the landscape
- reduce the degree of deviation from the Landscape Character that may occur
- increase the intactness or level of expression of the Landscape Character that will result from the Proposed Action
- reduce or eliminate visibility of the Proposed Action from sensitive viewpoints

Effective mitigation measures are those that reduce the visibility or weaken the contrast of the Proposed Action. Further, in assessing the impact of the proposed activity, it was determined that all Alternatives would have at least a "low" impact since there would always be some level of identifiable impact to viewers as long as the transmission line is visible. Proposed visual mitigation measures are shown below in **Table 14**.

Mitigation Measures

The following seven mitigations are proposed for the Proposed Action. These mitigations would be applied, as appropriate, to all high and moderate impacts to reduce impact levels for views from stationary and linear KOPs for compliance with BLM VRM objectives.

Table 14 Proposed Mitigation Measures

VR-1	<i>Use BLM environmental colors (Standard Environmental Colors, Color Chart CC-001, 2008) for surface coatings of permanent buildings, fences, gates, and tanks at terminal sites. Color selection is based on a site-specific assessment. Paint grouped structures the same color to reduce visual complexity and color contrast.</i>
Effectiveness	This mitigation would substantially reduce impacts of the terminal sites.
VR-2	<i>Locate structures, roads, and other project elements as far back from road, trail, and wash crossings (linear KOPs) as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.</i>
Effectiveness	This mitigation would substantially reduce visual contrasts by decreasing the apparent size and extent of structures.
VR-3	<i>In areas with no existing transmission lines, move the transmission line (alignment) away from the immediate foreground of stationary (non-linear) KOPs to a distance of 0.5 miles or more. Where feasible, approach and cross at right angles to linear KOPs such as roads, trails, and washes.</i>
Effectiveness	This mitigation would substantially reduce visual contrasts.
VR-4	<i>Feather hard ROW edges in areas of intact landscapes in the immediate foreground and foreground-middleground views from linear and stationary KOPs.</i>
Effectiveness	This mitigation would substantially reduce visual contrasts in the most visually sensitive landscapes.
VR-5	<i>Materials and surface treatments of structures and land disturbances should repeat and/or blend with the existing form, line, color, and texture of the landscape and have little or no reflectivity (non-specular).</i>

Effectiveness	This mitigation would reduce line and form structure contrasts by blending structures with existing structures.
VR-6	<i>Where paralleling an existing transmission line, where possible, place the structures to match the locations of structures in the existing line.</i>
Effectiveness	This mitigation would reduce visual contrasts from strong to moderate and moderate to weak.
VR-7	<i>Minimize lighting at terminal and construction facilities to the extent permitted by OSHA and down shield lights to reduce night glare and light pollution.</i>
Effectiveness	This mitigation would substantially reduce night-time visual contrasts by diminishing the effects of lighting on the night landscape.

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